



# Software Diversification for WebAssembly

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Doctoral Thesis in Computer Science  
Supervised by  
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## **Abstract**

**Keywords:** Lorem, Ipsum, Dolor, Sit, Amet

## Sammanfattning

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1. ***WebAssembly Diversification for Malware Evasion***  
**Javier Cabrera-Arteaga**, Tim Toady, Martin Monperrus, Benoit Baudry  
*Computers & Security, Volume 131, 2023, 17 pages*  
<https://www.sciencedirect.com/science/article/pii/S0167404823002067>
2. ***Wasm-mutate: Fast and Effective Binary Diversification for WebAssembly***  
**Javier Cabrera-Arteaga**, Nicholas Fitzgerald, Martin Monperrus, Benoit Baudry  
*Submitted to Computers & Security, 17 pages*  
<https://arxiv.org/pdf/2309.07638.pdf>
3. ***Multi-Variant Execution at the Edge***  
**Javier Cabrera-Arteaga**, Pierre Laperdrix, Martin Monperrus, Benoit Baudry  
*Moving Target Defense (MTD 2022), 12 pages*  
<https://dl.acm.org/doi/abs/10.1145/3560828.3564007>
4. ***CROW: Code Diversification for WebAssembly***  
**Javier Cabrera-Arteaga**, Orestis Floros, Oscar Vera-Pérez, Benoit Baudry, Martin Monperrus  
*Measurements, Attacks, and Defenses for the Web (MADWeb 2021), 12 pages*  
<https://doi.org/10.14722/madweb.2021.23004>
5. ***Superoptimization of WebAssembly Bytecode***  
**Javier Cabrera-Arteaga**, Shrinish Donde, Jian Gu, Orestis Floros, Lucas Satabin, Benoit Baudry, Martin Monperrus  
*Conference Companion of the 4th International Conference on Art, Science, and Engineering of Programming (Programming 2021), MoreVMs, 4 pages*  
<https://doi.org/10.1145/3397537.3397567>
6. ***Scalable Comparison of JavaScript V8 Bytecode Traces***  
**Javier Cabrera-Arteaga**, Martin Monperrus, Benoit Baudry  
*11th ACM SIGPLAN International Workshop on Virtual Machines and Intermediate Languages (SPLASH 2019), 10 pages*  
<https://doi.org/10.1145/3358504.3361228>

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**Thesis**